

REMARKS

Claims 1-20 are pending. Claims 1 and 15 have been amended. Support for the amendments can be found at page 8, lines 19-20 of the application. No new matter has been added. The Applicant thanks the Examiner for indicating the allowability of claim 16.

Rejections Under 35 U.S.C. § 102(b)

Claims 1 and 15 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,938,851 to Moshtagh ("Moshtagh"). See Office Action at page 1.

Applicants have discovered a chemical vapor deposition system including a housing that defines an enclosed deposition chamber and includes a seal assembly that extends between the lower and upper housing portions at their horizontal junction. The system also includes an annular radiation shield at a location adjacent to the chemical vapor distributor. See independent claims 1 and 15.

Amended claims 1 and 15 includes a seal assembly that extends between the lower and upper housing portions at their horizontal junction and an annular radiation shield at a location adjacent to the chemical vapor distributor. Moshtagh does not include such a seal. Moshtagh does not disclose any kind of seal anywhere. The Examiner asserts that Moshtagh has a seal at flange 74 and the unnumbered flange below flange 74. See Office Action at page 2. Applicants respectfully disagree. There is nothing in Moshtagh to indicate that a seal, as known to those skilled in the art to be a tight and perfect closure as against the passage of gas or water, exists at the point indicated by the Examiner (the Examiner mentions that Merriam Webster's online dictionary refers to a seal as something that secures. This particular definition of seal refers to the old practice of affixing a seal to documents, sometimes in wax, as security that the document was sent by the person that secured it with their seal or stamp. This particular definition does not, and would not be the one used by those of ordinary skill in the art to define seal when presented with the contents of the specification). Regardless of this, the amended claim is believed to overcome the Examiner's interpretation of Moshtagh because Moshtagh does not disclose an annular radiation shield at a location adjacent to the chemical vapor distributor.

For at least these reasons independent claims 1 and 15 are not anticipated by Moshtagh.

Rejections Under 35 U.S.C. § 103(a)

Claims 2-14, 17-20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Moshtagh in view of combinations of U.S. Patent No. 4,558,660 to Nishizawa *et al.* ("Nishizawa"), U.S. Patent No. 5,368,648 to Sekizuka *et al.* ("Sekizuka"), U.S. Patent No. 5,614,249 to Mayeda ("Mayeda"), U.S. Patent No. 4,040,372 to Flanders ("Flanders"), U.S. Patent No. 4,591,374 to Klemola ("Klemola"), U.S. Patent No. 3,541,293 to MacDonald *et al.* ("MacDonald"), U.S. Patent No. 5,028,250 to Deb *et al.* ("Deb"), U.S. Patent No. 5,589,007 to Fujioka *et al.*, and U.S. Patent No. 3,658,585 to Folkmann *et al.* Claims 2-9 and 13-14 depend from independent claim 1. Claims 10, 11 and 12 and 15 are each independent. Claims 17-18 depend from claim 12. Claims 19-20 depend from claim 15.

Independent Claims 1, and 15 and the claims that depend therefrom

Independent claims 1, and 15 have been amended. Each of these claims includes a seal assembly that extends between the lower and upper housing portions at their horizontal junction and an annular radiation shield at a location adjacent to the chemical vapor distributor. See Amended independent claims 1, and 15. The Examiner asserts that Moshtagh teaches a seal assembly that extends between the upper and lower housings at their horizontal junction. See Office Action at page 20. Applicants respectfully disagree. Moshtagh does not include a seal at the point indicated by the Examiner. In fact, Moshtagh does not teach or suggest a seal at any point, and the Examiner has created the seal out of whole cloth. Regardless of this, Moshtagh does not teach or suggest an annular radiation shield at a location adjacent to the chemical vapor distributor.

Nishizawa, Sekizuka, Mayeda, Flanders, Klemola, MacDonald, Deb, Fujioka, and Folkmann each fail to cure the deficiencies of Moshtagh. Nishizawa teaches an apparatus for fabricating semiconductor wafers at a low temperature using epitaxial growth, chemical vapor deposition, thermal oxidation or nitridation combined with UV and infrared irradiation of the wafer surfaces and the atmosphere. See Nishizawa at column 1, lines 49-48. Sekizuka teaches the middle portion between two metal sealing members being evacuated to a vacuum. See

Sekizuka at column 2, lines 40-47. Mayeda teaches a leak detection system for detecting leaks in a gas manifold of a CVD apparatus. See Mayeda at column 2, lines 20-24. Flanders teaches a method for detachably assembling together the sections of a storage and shipping barrel. See Flanders at column 2, lines 52-64. Klemola teaches an apparatus for equalizing the temperature of conveyor rolls in a glass furnace. See Klemola at Abstract. MacDonald teaches a muffle furnace having a unitary core supporting a readily replaceable heating unit. See MacDonald at Abstract. Deb teaches a tunnel type heating furnace for heating glass sheets. See Deb at Abstract. Fujioka teaches a gate or lock for a metal treatment chamber under a pressure different than ambient. See Fujioka at column 1, lines 60-62. Folkmann teaches a method of precipitating layers of semiconducting or insulating material from a flowing reaction gas or from a flowing dopant gas upon heated semiconductor crystals. See Folkmann at column 1, lines 6-10. None of these references, alone or in combination teaches or suggests including a housing that defines an enclosed deposition chamber and includes a lower portion and an upper portion having a horizontal junction with each other and a seal assembly that extends between the lower and upper housing portions at their horizontal junction, or an annular radiation shield at a location adjacent to the chemical vapor distributor.

For at least these reasons claims 1 and 15 and the claims that depend therefrom are patentable over Moshtagh combined with any or all of Nishizawa, Sekizuka, Mayeda, Flanders, Klemola, MacDonald, Deb, Fujioka, or Folkmann. Applicants respectfully request reconsideration and withdrawal of the obviousness rejections.

Independent claims 10, 11 and 12 and the claims that depend therefrom

Each of these independent claims features a chemical vapor deposition system including a seal assembly that extends between the lower and upper housing portions at their horizontal junction. See independent claims 10, 11 and 12. The Examiner asserts that Moshtagh teaches a seal assembly that extends between the lower and upper housing portions at their horizontal junction. Applicants respectfully disagree. There is nothing in the drawings or specification or claims of Moshtagh that teaches, suggests, or motivates one of ordinary skill in the art to provide a seal assembly that extends between the lower and upper housing portions at their horizontal

junction. The Examiner attempts to create a seal and a seal assembly from flange 74 and an unnumbered item that is adjacent to the flange. See Office Action at page 2. There is no indication anywhere in Moshtagh that these identified items are used to form a seal. The Examiner states that the flanges are used to mount the upper and lower housings together. See Office Action at page 20 (citing Moshtagh column 5, lines 5 and 11-16). This statement does not indicate a seal of any sort, furthermore it does not indicate a seal assembly that extends between the lower and upper housing portions at their horizontal junction. Nothing in these statements or in Moshtagh indicates any form of seal extending between upper and lower housings. Thus, Moshtagh fails to teach or suggest a seal assembly that extends between the lower and upper housing portions at their horizontal junction.

As discussed previously none of Nishizawa, Sekizuka, Mayeda, Flanders, Klemola, MacDonald, Deb, Fujioka, or Folkmann and no combination of them cure this deficiency of Moshtagh.

Most importantly, the Examiner has failed to establish a *prima facie* case of obviousness. The Examiner is using hindsight to reconstruct Applicants' patent from prior art with no motivation provided for combining the references. The Federal Circuit has made it clear that obviousness cannot be established simply by stitching together pieces of prior art using the patent as a template. Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1143 (Fed. Cir. 1985); see also Loctite Corp. v. Ultraseal Ltd., 781 F.2d 861, 873 (Fed. Cir. 1985) (denouncing courts' tendency to depart from proper standard of nonobviousness "to the tempting but forbidden zone of hindsight."); In re Fine, 837 F.2d 1071, 1075 (Fed. Cir. 1988) ("One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."); In re Dembiczak, 175 F.3d 994, 999 (Fed. Cir. 1999) ("Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references."). Respectfully, it is an incorrect application of the law for the Examiner in this case to find ten pieces of art from which she believes she can pick and choose different parts to construct Applicant's invention to render it obvious. The courts

have uniformly found this approach to obviousness rejections to be incorrect. Each of the cited references must provide some suggestion, motivation, or teaching for combining known components. See Heidelberger Druckmaschinen AG v. Hantscho Commercial Prods., Inc., 21 F.3d 1068, 1072, 30 USPQ2d 1377, 1379 (Fed.Cir.1994) ("When the patented invention is made by combining known components to achieve a new system, the prior art must provide a suggestion or motivation to make such a combination."); C.R. Bard, Inc. v. M3 Systems, Inc., 157 F.3d 1340 (Fed. Cir. 2000). There has been no motivation provided in this case to string together the individual pieces of the ten different patents to try to form Applicants discovery. As a result, the Examiner has failed to provide a proper *prima facie* case of obviousness.

For at least these reasons claims 10, 11 and 12 and the claims that depend therefrom are patentable over Moshtag combined with any or all of Nishizawa, Sekizuka, Mayeda, Flanders, Klemola, MacDonald, Deb, Fujioka, or Folkmann. Applicants respectfully request reconsideration and withdrawal of the obviousness rejections.

Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: _____

9-30-03



Harold H. Fox
Reg. No. 41,498

Fish & Richardson P.C.
1425 K Street, N.W.
11th Floor
Washington, DC 20005-3500
Telephone: (202) 783-5070
Facsimile: (202) 783-2331